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In re Application of: )

Basford, William C. )

Filing Date: June 8, 2001 )

Serial No.: 09/877,585 )

For: )

**AERODYNAMIC COMBINATION FOR  
IMPROVED BASE DRAG REDUCTION** )  
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Patent Examiner:  
Patel, Kiran B.

ART UNIT: 3612

November 25, 2003  
Hallowell, Maine  
Zip: 04347

**PETITION TO THE COMMISSIONER UNDER 37 CFR 1.181 FOR  
RECONSIDERATION OF FINAL REJECTION UNDER 35 USC 112**

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**INTRODUCTION**

This Petition is being filed in response to a telephonic instruction from Supervisory Examiner, Glen Dayoan (703) 308 - 3102 after his preliminary review of the record in this case. The petition is based upon the documents on file, 37 CFR 1.181 and in the alternative under MPEP Section 706.07 (Premature final rejection.)

**Brief Description of the Application**

The Application is directed to embodiments of aerodynamic configurations for attachments at the rear end of a truck body in order to reduce drag on the truck body. The invention reduces fuel consumption with a minimum of inconvenience to otherwise normal truck operation.

The Application was filed by the inventor Basford while living in New Hampshire and is based upon two earlier Provisional Applications.

At the time of Examination the Application included 13 Figures, 18 original claims, specification of almost 50 pages, 23 Non-patent references and 10 patent references. Examiner Patel then added another 29 patent citations in his first Office Action.

Applicant's Attorney located in Maine did not get involved until well after a series of telephone exchanges occurred between Applicant Basford and Examiner Patel, and a first Office Action, together with certain restriction requirements, had taken place. Even after the present Attorney made an appearance with a Maine address, Patent Office mail continued to go to Mr. Basford's earlier New Hampshire address. Mr. Basford was then living in Maine and all Patent Office mail should have been going to Maine.

Examiner Patel, in a "rush to rejection" became so fixated on a Second Action Final that he totally lost sight of the fact that the Inventor/Applicant was following the Examiner's suggestions in spite of a clash of personalities between the Examiner and the Applicant. For example, Applicant Basford sought out an Attorney to improve the form of the drawings, claims, specification and add generic claims - all as required/suggested by Examiner Patel.

The record will show that Examiner Patel - from a technology standpoint - was in over his head; but, nevertheless, refused to give an additional Office Action so that a clear issue for Appeal and/or Allowance purposes could be formulated. In that environment, a

practical common sense approach of working with the Applicant and his Attorney was overlooked.

The patentability issues could have been finely honed without undue delay or numerous repetitive Actions if Examiner Patel had resisted an immediate Final Rejection; or, if Examiner Patel had shown any willingness to aid the inventor/Applicant in his quest for an allowance.

Reconsideration is respectfully requested.

### **Status of claims in case**

Claims 1 through 4, 11, 12 and 14 through 35 are pending, with claims 1 through 4, 11, 12, 14 through 25 and 30 being assertively withdrawn from consideration. Claims 26 through 29 and 31 through 35 stand finally rejected under both 35 USC 112 and 35 USC 103(a). (No petition is filed regarding the prior art 35 U.S.C. 103(a) rejection at this time.)

Claim 30 is dependent from examined claim 27 and thus is improperly listed as withdrawn. Claim 30 should be subject to examination along with the other claims. This petition seeks reconsideration of the final rejection under 35 USC 112 as being done without adequate consideration and/or as being premature.

### **Background facts**

Briefly stated the record includes the following facts which show that the final rejection was both premature and based upon unsound considerations. Each factual event in a time line includes brief comments.

June 8, 2001

Applicant, Mr. William Basford, acting on his own and without the assistance of any patent attorney filed his own utility patent application. When Examination began, Mr. Basford had some telephone conferences with Examiner, Mr. Kiran B. Patel. Without benefit of counsel, Mr. Basford discussed his aerodynamic-related invention for conservation of fuel usage via novel positioning of certain attachments to the back of truck bodies.

Examiner Patel noted the absence of any generic claim covering two separate embodiments and telephonically divided the application by a Restriction Requirement. The telephone exchanges between Applicant Basford and Examiner Patel were neither fruitful nor pleasant. An atmosphere of hostility and distrust resulted when Examiner Patel kept giving Applicant incorrect information about the law regarding combination patents.

September 9, 2002

The first Office Action issued. It was primarily directed to procedural shortcomings regarding the form of the Application. The format of the specification was incorrect. Section headings defining the content of the specification were missing. Examiner Patel suggested to Mr. Basford that a Registered Patent Attorney should help in the prosecution.

Some of the comments by Examiner Patel - regarding a 35 USC 112 rejection of then pending claims 5 through 18 - reveal that Examiner Patel lacked technical competence in aerodynamics of fluid flow over bluff bodies.

March 20, 2003

The undersigned Patent Attorney filed a Power of Attorney and entered an appearance. An amendment was filed on March 20, 2003 revising the format of the specification, inserting proper headings and making changes to the claim terminology. Rewritten claims, including claims 19 through 35 were drafted with care to overcome the earlier 35 USC 112 complaints regarding the original claims.

According to Examiner Patel:

Claims 26 - 29, 31 - 35, as best understood are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Emphasis by Patel.)

To the contrary claims 26 through 29 and 31 through 35 are believed to be clear, definite and in proper form. As mentioned earlier claim 30 is dependent from claim 27 and thus must not be considered as withdrawn.

Mr. Basford submitted a Declaration under 35 CFR Section 1.132, and in 18 separate paragraphs requiring seven pages, set forth cogent reasons why the claimed invention was clearly defined and why it distinguished over the art.

In this unique situation, fairness and a balanced desire to deal justly with both the public and the Applicant, mandates that the first direct "PTO-to-Applicant" Action should not count toward an immediate Second Action Final. Additionally, after clearing up

terminology uncertainties, another Action on the merits would have allowed a clear issue to develop between the Patent Office and the Applicant. That never happened.

May 27, 2003

The first rejection was made final.

Examiner Patel refused any further consideration even though a clear issue between the parties had not yet been developed. To the extent that claim ambiguity may have been involved, no guidance was offered by Examiner Patel and no attempt was made to offer suggested changes. Indeed, the hasty and ill-considered final rejection left Applicant adrift without any comfort that Examiner Patel had really tried to understand the invention.

July 26, 2003

Within two months after Final rejection another detailed and thorough Amendment was filed. Reconsideration of the final rejection was requested to no avail.

That July amendment included another Declaration by Mr. Basford, detailing the trouble that he had encountered with Mr. Patel's lack of grounding in principles of aerodynamics and fluid flow. Applicant submitted a detailed second Declaration pointing out the lack of technical experience in the area of aerodynamics

and fluid flow as exhibited by Examiner Patel. Applicant requested that a new Examiner be appointed to replace Examiner Patel.

Neither the second Basford Declaration nor the Amendment of July 26, 2003 was entered.

August 26, 2003

A first Advisory Action was issued by an Acting Examiner Pedder in which Attorney Stanley R. Jones was referred to as Mr. Stone. No telephone conference, as requested, in the July Amendment ever took place, and PTO mail continued to go to a former New Hampshire Address for Mr. Basford.

In that Advisory Action the second Declaration by Applicant Basford was denied entry because it:

"...was found to be non persuasive because the Declaration lacks valid arguments against the art rejection."

The art rejection was discussed in the first Basford Declaration filed on March 19, 2003. That first Basford Declaration has yet to be mentioned by the PTO. It is as if it were never filed.

Admittedly, the second Basford Declaration does not discuss the art rejection. The second Basford Declaration was filed in order to point out the lack of competence of Examiner Patel, and to show that the invention has not yet received a full and complete examination.

October 17, 2003

The power of Attorney to the undersigned - submitted on March 27, 2003 was finally accepted. Mail, nevertheless, continued to go directly to Mr. Basford and telephone contact continued between Basford and Examiner Patel. Such further telephonic communication was not helpful.

October to Date

Mr. Patel's supervisor, Mr. Glen Dayoan, then informally reviewed the case file. This Petition for Reconsideration, under CFR 1.181 and limited to the 35 USC 112 issue, is filed pursuant to his suggestion and preliminary review.

## **ARGUMENT**

Applicant has not yet received an adequate examination of his invention. The invention is simple in concept and involves a combination of vortex generators and shortened boattail plates. These aerodynamic features greatly reduce fluid dynamic base drag.

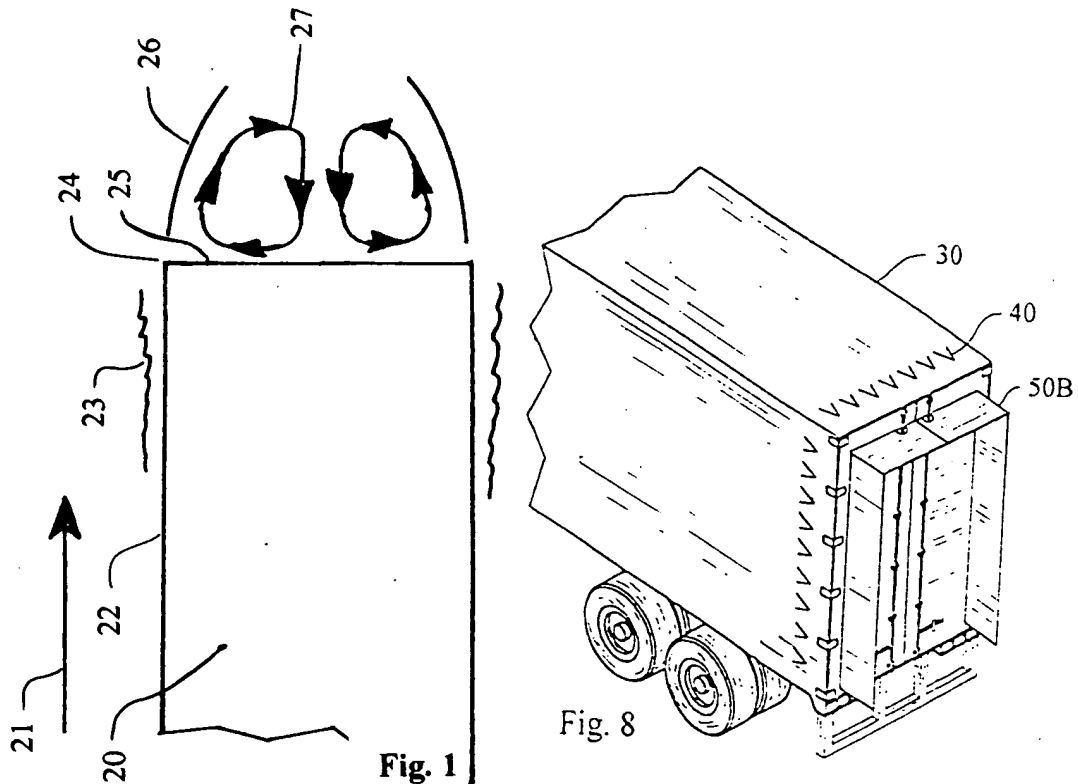
Representative claims include claims 26 and 27. The examiner questioned the number of "boattails" of these claims and stated:

It is not clear whether applicant is claiming three or four boattails. (Emphasis Added.)



It is highly instructive that Examiner Patel fails to appreciate the difference between prior art "boattails" and "boattail plates" as described and claimed by Basford. Moreover, Examiner Patel never understood that shortened boattail plates were claimed with a new and unusual configuration and a highly significant result. The grounds for his rejection were not adequately developed since Examiner Patel has not yet addressed the difference between boattails and boattail plates.

Fig. 1 and Fig. 8 of the application are shown side by side below.



Mr. Basford clearly specified the distinct differences between Boattails and Boattail Plates in his specification and original claims. (Mr.

Basford's original claims 5 through 18 also claimed "boattail plates".) Headings in the specification were provided by Mr. Basford in order to assist the reader. There is a heading entitled Boattails commencing at page 7, line 1, and clearly describes them and their drawbacks continuing unto page 8, line 20.

It is there stated in part under Full Boattails that such boattails "terminating in a point or narrow edge" are rarely used.

[T]he primary drawback of full boattails is that the maximum drag reduction requires extreme length, often three to four times the width of the bluff body, making full boattails impractical for highway vehicles.

At another distinct heading at page 9, line 23, Basford sets forth boattail plates and devotes over two pages to the technological development of such structure. The two categories of methods and devices are simply not the same. Mr. Patel simply glossed over the technology. Applicant has been harmed by incomplete, premature and precipitous action in the Patent Office.

Claims 19 through 25 are method claims and several of those claims specifically address the size of the shortened boattail plates. The sizing step of dependent claim 23 relates the length of the boattail plates to claim 22's definition of a roadway truck body restricted to a two foot limit for a rearward extension of trailer underride bars (shown in Fig. 8 above.)

For a typical full sized 102 inch wide semi-trailer truck body trailer the length of the boattail plates is about 18 inches, or - as claim 23 states, in part.

about 1/6 the ..... of the width ..... of the rear base surface [of the semi-trailer's base or rear surface].

Claim 24 expresses that sizing step as boattail plates about 12 inches in length. In any event, the extension length for the boattail plates of the invention is under the 24 inch limit. These facts were ignored by the Examiner who never addressed these issues in his action. Because of the precipitous and premature final rejection these issues remain unresolved.

Claim 26 is an apparatus claim. Claim 26 is directed to a generalized bluff body in a fluid, while claim 27 is specific to a highway vehicle moving in air. In the non-entered amendment dated July 26, 2003 the elements of the Basford drawing were inserted in claim 26 as an aid for the Examiner's review. Thus, claim 26 was amended with those element numbers from Basford Figures 1 and 8.

Claim 26 with element numbers present, ala the July 2003 amendment, reads as follows:

-- 26. Apparatus for reducing the fluid-dynamic base drag of a bluff body (20) moving through a fluid (21) and creating, at the rear of the body, a low pressure wake having an outer wake perimeter, which bluff body (20) has a substantially flat rear base surface (25), a pair of opposed side surfaces (22A and 22B), and opposed top and bottom surfaces all joined with said rear base surface at side, top and bottom trailing edges (24), respectively, so as to form a box-like container (30), said apparatus comprising:

means positioning side-by-side vortex generators in a linear array (40) ahead of the two side, top and bottom trailing edges (24) of said bluff body (20) for generating counter rotating stream-wise

vortices in a fluid boundary layer (23) passing generally along said bluff body and creating from said layer separated shear surfaces (26) which turn sharply inward aft of said trailing edges (24);

four boattail plates (50) inset and affixed a predetermined distance from the top and side trailing edges (24); and

rear edges on said boattail plates (50) sized to intercept the separated shear surfaces (26) at the outer perimeter of the low pressure wake, thereby providing maximum fluid-dynamic base drag reduction for said body. --

Claim 27 is a dependent claim and reads as follows:

27. The apparatus in accordance with claim 26 wherein the bluff body is a land vehicle moving in air, which vehicle has only three boattail plates attached adjacent the top and opposed side trailing edges; and

three linear arrays of vortex generators, one array each associated with one each of said boattail plates.

These claims are clear from any ambiguity and use generally accepted terminology for this art.

The Manual of Patent Examining Procedure has not been followed by Examiner Patel. As there stated:

Before final rejection is in order a clear issue should be developed between the examiner and the applicant....Present practice does not sanction hasty and ill-considered final rejections. The applicant who is seeking to define his or her invention in claims that will give him or her the patent protection to which he

or she is justly entitled should receive the cooperation of the examiner to that end, and not be prematurely cut off in the prosecution of his or her case.

The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal. However, prosecution of a case [is] to be confined to as few actions as is consistent with a thorough consideration of its merits.

Moreover, in a statement particularly applicable to this case, the MPEP in Section 706.07(a) specifically warns about a second action final when it states:

.....[O]ne would reasonably expect that a rejection under 35 USC 112 for the reason of incompleteness would be responded to by an amendment supplying the omitted element.

In the present situation, Applicant and his Attorney both tried in vain to supply not only another Amendment but a supporting Declaration. Both were summarily ignored and refused consideration. Indeed, one is left with the distinct impression that Examiner Patel does not understand any of the inventive features.

In any event, however, 35 USC 112 issues certainly have not yet been fully developed. Has the work load at the Patent Office become so heavy that an Examiner no longer has time to do his job? One certainly hopes not. Invention has contributed greatly

to this countries' advance and a thorough consideration in the Patent Office is owed both to the public in general, but to inventors in particular.

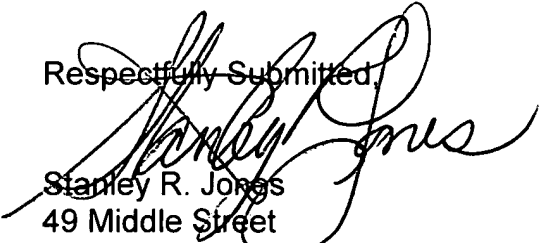
## **Conclusion**

It is respectfully submitted that all inventors - particularly those who try to prosecute their own case - should not receive premature final rejections. In such cases, in particular when the inventor is prosecuting his own case, the Examiner must try extra hard to be of assistance to that inventor. After all, while second action finals may be the desired norm, the Manual, fairness and justice all recognize that there must always be exceptions to the generally desired procedure. Examiner Patel obviously does not understand or want to meet these extra objectives.

For the above-stated reasons, it is believed that this Petition for Reconsideration regarding the 35 USC 112 rejection should be granted. Additionally, it is respectfully submitted that both the Amendment and the supporting Basford Declaration filed on July 26, 2003 should be entered in the record.

Granting this Petition will allow a clear issue to be developed for purposes of Allowance or Appeal. An Appeal will be noticed within the six month statutory period from the date of the Final Rejection or before November 27, 2003.

Respectfully Submitted,



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